

## **REMARKS**

### **I. Introduction**

Claims 1-30 are pending in this application. By this amendment, claims 15-17 are amended for clarification purposes only. Reconsideration, in view of the foregoing amendments and following remarks, is respectfully requested.

### **II. Claims Objections**

The Examiner objects to claims 15-17 because of minor informalities. Specifically, the Examiner has objected to these claims because it is unclear whether the use of “DC” in these claims is a value, level or threshold. In order to overcome this objection, Applicants have amended each of these claims to clarify the meaning of “DC.” Accordingly, withdrawal of the objection is respectfully requested.

### **III. Allowable Subject Matter**

Applicants appreciate the Examiner’s indication of allowable subject matter in claims 2-9, 11-21, 23, 24 and 26-30. However, for the reasons set forth herein, Applicants submit that all pending claims are in a condition for allowance.

### **IV. Claims Rejections under 35 U.S.C. § 103(a)**

The Examiner has rejected claims 1, 10, 22 and 25 under 35 U.S.C. § 103(a) over U.S. Patent 6,766,153 to Kozak *et al.* (hereinafter “Kozak”). Applicants respectfully traverse the rejection.

At the outset, Applicants note that Kozak was filed on April 2, 2001. The instant application was filed on July 30, 2001, but is based on U.S. Provisional Application 60/259,731 entitled "Packet Acquisition and Channel Tracking for a Wireless Communication Device Configured in a ZIF Architecture," which, was filed on January 4, 2001. Applicants submit that each of independent claims 1, 10, 22 and 25 are fully supported by that provisional application. Therefore, because that provisional application was filed prior to Kozak, Kozak does not qualify as prior art against the instant application. Accordingly, Applicants respectfully submit that the rejection based on Kozak has been rendered moot. For the Examiner's convenience, Applicants have included a copy of that application including the drawing figures filed therewith with this response.

The inapplicability of Kozak notwithstanding, Applicants believe that there are non-obvious differences between independent claims 1, 10, 22 and 25 and Kozak. In particular, in the context of claim 1, Applicants submit that Kozak fails to disclose or suggest a method of controlling operation of a wireless communication device configured in a ZIF architecture including a DC feedback control loop and a gain feedback control loop, comprising processing energy in a wireless medium to generate a corresponding receive signal, monitoring the receive signal via a predetermined measurement window, detecting a changed condition in the wireless medium, holding the gain feedback control loop at a constant gain level after detecting the changed condition, and operating the DC feedback control loop in an attempt to search a stable DC value for the receive signal while the gain feedback control loop is held constant.

Similarly, claim 10, recites a method of operating a wireless communication device comprising, *inter alia*, determining if a DC threshold condition of the receive signal is exceeded,

and if the DC threshold condition is exceeded, holding the gain feedback control loop at a constant gain level and operating the DC feedback control loop to reduce DC of the receive signal until the DC threshold condition of the receive signal is met;

Claim 22 recites a method of operating a wireless transceiver comprising, *inter alia*, holding a gain level of the gain feedback control loop constant during a predetermined quiet period after transmission of a packet and operating the DC feedback control loop during the predetermined quiet period in an attempt to resolve DC level while the gain feedback control loop is held; and

Claim 25 recites a method of operating a wireless communication device comprising, *inter alia*, storing a gain level value of the gain feedback control loop, detecting a packet being transmitted, after transmission of the packet is completed, retrieving the stored gain level value and holding the gain feedback control loop at the retrieved gain level value, operating the DC feedback control loop to search for a stable DC level, and determining whether the DC loop converges to a stable DC level.

In contrast to the claimed invention, Kozak merely teaches a system and method for automatic gain control. While gain control is an element of the systems and methods of the instant application, the teaching of Kozak fails to teach adjusting the DC feedback control loop — that is with an offset voltage — while holding the gain feedback control loop steady. In the Office Action, in regard to the claim limitation “*operating the DC feedback control loop in attempt to search a stable DC value for the receive signal while the gain feedback control loop is held constant*” the Examiner states that, Kozak teaches that during periods of transmission of packets, the average power signal (or DC value) is approximately constant. The Examiner further states that this is desirable to maintain the gain of the signal between packets at a certain

level in order to be able to process the signal. However, “operating the DC feedback control loop in an attempt to search...” does not refer to operating so that the average DC value is constant. Rather, in the systems and methods of the claimed invention, the DC feedback control loop is varied (that is, by introducing DC offset) to return the DC level of the receive signal to at or below the DC threshold. The gain feedback control loop and DC feedback control loop are separate loops (see elements 345 and 347 of FIGS. 3-7). The Examiner has incorrectly analogized these elements to the discriminator 46, Kalman gain coefficient generator with restart 50, correction multiplier 48, summer 52, delay 54 and inverse logarithm function 56. The control signal 58 to block 56 is described as optional and conveys information from the receiver that the AGC is now operating within a packet which can be used to freeze gain, that is not to change it, while receiving within a packet. These elements are for detecting changes and adjusting gain based on the detected gain, not for varying a DC feedback control loop (adding DC offset).

Therefore, in view of the distinction between, Applicants respectfully submit that independent claims 1, 10, 22 and 25 are patentable over Kozak.

**V. Conclusion**

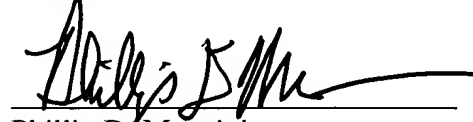
In view of the foregoing amendments and remarks, Applicants submit that this application is in a condition for allowance. Favorable reconsideration and prompt allowance of the claims are earnestly solicited. Should the Examiner believe that anything further would be desirable to place this application in even better condition for allowance, the Examiner is invited to contact Applicants' undersigned representative at the telephone number listed below.

Respectfully submitted,

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